CLAIMS

What is claimed is:

1. A vehicular propeller shaft system having a longitudinal axis of rotation, the system comprising:

a first section extending along the longitudinal axis between a first end adapted to be positioned toward a vehicular engine and a second distal end, the first section including a weakened area having maximum susceptibility to buckling transversely to the longitudinal axis under a generally axial load; and

a second section having a first end coupled to the second distal end of the first section and a second end adapted for coupling to a vehicular rear differential;

whereby when a predetermined generally axial load is applied to the first section, the first section buckles about the weakened area thereby absorbing substantially all of the axial load on the propeller shaft system.

2. The propeller shaft system of claim 1 wherein the weakened area comprises a tapered section extending from a smaller diameter portion of the first section to a larger diameter portion of the first section.

3. The propeller shaft system of claim 1 wherein the weakened area comprises a perforate area of the first section.

4. The propeller shaft system of claim 1 wherein the weakened area comprises a necked-down portion of the front section having a smaller outer diameter than a remainder of the first section.

5. The propeller shaft system of claim 1 wherein the first section comprises a hollow tube having an inner and an outer diameter defining a tube wall and wherein the weakened area comprises a narrowed area in the tube wall having a larger inner diameter than the remainder of the first section.

6. The propeller shaft system of claim 1 wherein the second section is adapted to be at least partially surrounded by a vehicular fuel tank.

7. An automotive vehicle comprising:

a motive power source; and

a propeller shaft system extending along a longitudinal axis for transmitting power from the power source to a differential, the propeller shaft system including a first section extending along the longitudinal axis between the power source and a mounting bracket, the first section including a weakened area susceptible to buckling transversely to the longitudinal axis under a generally axial predetermined load, and a second section having a first end coupled to the first section at the mounting bracket and a second end coupled to the differential;

whereby when the generally axial predetermined load is applied to the first section, the first section buckles at the weakened area and the second section remains substantially stationary in any direction transverse to the longitudinal axis.

8. The vehicle of claim 7 further comprising an additional mounting bracket located rearwardly of the mounting bracket and supporting the second section.

9. The vehicle of claim 7 wherein the second section is at least partially surrounded by a fuel tank of the vehicle.